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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,070	03/29/2004	Gustaaf Willem Van Der Feltz	1857.2780000	8087
26111	7590	03/13/2006		
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER KIM, PETER B	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,070

Applicant(s)

VAN DER FELTZ ET AL.

Examiner

Peter B. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's arguments filed on Jan. 11, 2006 have been fully considered.

Claim Objections

Claims 1, and 13 are objected to because of the following informalities: "the substrate support" lacks proper antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 13, adjusting system that adjusts the spatial characteristics of the target portion seems to suggest that the target portion of the substrate is adjusted when the adjustment is done to the beam pattern shape, beam alignment or beam magnification.

The remaining claims, not specifically mentioned, are rejected for incorporating the defects from the base claim by dependency.

In view of the above discussed issue, the following art rejection is based on the examiner's best understanding of the claims.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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Claims 23-28 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. Regarding claim 23, merely deriving a model has no real utility unless the claim includes another step of using the model to adjust the spatial characteristics.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto (GB 2321316).

Hashimoto discloses a lithographic apparatus comprising an illumination system (22), a patterning system (13), a substrate support (8), a projection system (12), a temperature measuring system (2), a calculating system (11), an adjusting system that adjusts the spatial characteristics of the target portion relative to the substrate support to compensate for the calculated dimensional response (p. 16-19). Hashimoto discloses temperature measure system comprising at least one sensor that measure the temperature of the substrate at each of plurality of regions across the surface, sensors distributed across the support and sensing the temperature of an adjacent region of the substrate (Fig. 1, ref. 2). Hashimoto also discloses temperature mapping system (Fig. 2).

Hashimoto discloses device manufacturing method and the method of establishing a model comprising emitting projection beam, imparting to the beam a pattern, supporting a substrate, projection the pattern to target portion of the substrate (p. 12, lines 13, 14 and p. 16,

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lines 13-17), measuring temperature of the substrate, calculating a dimensional response and adjusting the spatial characteristics, and deriving a model of the dimensional response (p. 16, line 24 - p. 19, line 5).

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ota (6,061,119).

Ota discloses a lithographic apparatus, and a device manufacturing method comprising a illumination system (IL), a patterning system (R1), a projection system (PL), a temperature measuring system (col. 4, lines 25-45, col. 8, lines 30-43), a calculating system (col. 10, line 65 – col. 11, line 4) and an adjusting system that adjusts the spatial characteristics of the target portion relative to the substrate support to compensate for the calculated dimensional response (col. 6, lines 25-40).

Response to Arguments

Applicant argues that Hashimoto does not disclose spatial distribution which is predetermined assuming a predetermined temperature. However, applicant also states that a second temperature is derived by measuring the distance between the alignment marks. It seems that in order to determine the second temperature based on the distance between the alignment marks, the spatial distribution must be predetermined.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:00 AM - 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim
Primary Examiner
Art Unit 2851

March 3, 2006